REMARKS

Claims 31-64 have been cancelled. New Claims 65-75 have been added. Claims 1, 9, 12, 19, 20 and 23 have been amended to merely define the invention with more clarity. Accordingly, Applicant asserts that no claims have been narrowed within the meaning of Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., No. 95-1066, 2000 WL 1753646 (Fed. Cir. Nov. 29, 2000). Additionally, Applicant asserts that all amendments are supported by the application-as-filed and that no new matter has been added. Claims 1-30 and 65-75 are now in the application. Reconsideration of the application is requested in light of the foregoing amendments and following remarks.

Rejection of Claims under 35 U.S.C. §103(a)

Claims 1-30 stand rejected under 35 U.S.C. §103 (a) as being unpatentable for obviousness over Liang (US 5,274,973) in view of Thomas (US 4,845,858). Applicant respectfully traverses the rejection.

Claim 1 originally recited that the stud locator markings are affixed directly to the respective elongate piece of lumber. For clarity and emphasis, Claim 1 has been amended to recite that the markings are deposited directly on...the respective piece of lumber at surfaces which assist in defining . . .[a] thickness dimension of the . . . piece of lumber. No reference teaches or suggests placing the marking on the surface of the lumber itself. Liang deforms a metal tab out of a metal framing piece, called a "track member" by Liang, to provide a locator, or provides a pre-cut slot in a piece of wood lumber. Liang thus uses structural elements projecting either from or into the framing piece as stud location indicators. In either case, the lumber is deformed and weakened by the location indicators. Liang does not provide essentially dimensionless marking material for purposes of indicating stud locations.

Thomas adds a web of tape to the surface of the wood lumber. Such tape can be displaced in the abusive treatment to which wood, or metal, framing members are commonly exposed. In addition, the tape imposes a material layer which has

compressive and/or slip properties which must be taken into account in using such lumber, as well as having thickness properties which can have an affect on use of the lumber.

The examiner asserts that it would have been obvious...to "combine Liang's invention with stud locator marking tape from Thomas...to provide more visibly convenience." Applicant traverses this assertion. The purpose of the bent-out tabs, or pre-cut slots, in Liang is to provide physical structure as location indicators. All a user has to do is to push a stud against a tab, and the tab forcibly stops movement of the stud (Liang Figs. 1-5, 10-15). There would be no need, no use, for marking indicators since the tab is a dominant stud indicator, and since the metal "track member" piece of Liang is not intended for tab creation on the work site.

In the alternative (Liang Figs. 6-9), the user inserts a stud into a slot, and the slot forcibly restrains the stud from movement along the length of the slotted track member.

The tape marking of Thomas would, of course, be useless in the metal track members of Liang since tab formation at the construction site is not intended. Applicants submit that use of the tape of Thomas with the embodiments of Liang Figs. 6-9 is likewise not obvious, not practical, whereby there would be no incentive to employ such tape in combination with the slots of Figs. 6-9, for the following reasons.

Slots 28 of Liang (Figs. 6-9) are recessed into the "track member," reducing the structural strength of the track member. Because of such strength reduction, a user would desire that the number of slots in the track be held to a minimum. Thus, the desired slot spacing at the construction site would be determined prior to cutting the slots in manufacturing the track member. To then add the tape of Thomas suggests that the spacing of the slots as manufactured is incorrect, whereby the cure for such defect is to cut slots at the correct spacing, at the construction site, not to add the tape of Thomas. So addition of the tape to a slotted track member is counterintuitive to the teaching of Liang.

But, for the sake of completeness of analysis, let's suppose that tape of Thomas is added to a track member of Figs. 6-9 of Liang. And suppose that a user then determines that some of the slots are in the wrong stud locations, but proper stud locations are indicated on the tape. The existing slots cannot be easily filled in to restore the lost strength. The slots cannot be moved. So what is the user to do?

If the slots are on e.g. 8 inch centers, then either of the common spacings, of 16 inches or 24 inches, can be used. The 8-inch spaced slots provide adequate and appropriate slot locations for placement of the studs. No tape is called for since both standard stud spacings (16 inch, 24 inch) are provided for. A negative implication of the 8-inch spacing is that some of the slots will go unfilled in either 16-inch or 24-inch spacing, leaving the track member permanently weakened without compensating construction-time savings or accuracy improvements. Thus, there is limited incentive to make track members with 8-inch spacings. But, even if such spacing is used, there is absolutely no incentive to add the tape of Thomas, since all common spacings are already accounted for. And since the product is intended for the mass market, niche uses do not provide the incentive for adding cost by adding such tape to such mass market product.

If the slots are on 16-inch centers, and 16-inch centers is the desired spacing, all slots are properly spaced, and are used, whereby there is no incentive for use of the tape of Thomas.

If the slots are on 16-inch centers, and a 24-inch spacing is desired, about 1/3 of the slots will be properly positioned, and will be used, while 2/3 of the slots will not be properly positioned, and thus will not be used. Further, about ½ of the studs to be connected to the track member will be connected where there is no slot. This leaves the user with a no-win choice. As a first option, the user can cut additional slots in the track member at the construction site. Such option has the benefit that all studs can then be the same length, assuming a wall dimension which is constant in height along the length of the wall; also assuming that workers at the construction site can match, with the same level of precision, the depths and widths of the slots cut on site to the depths and widths of the slots pre-cut by the manufacturer of the track member; also assuming that the workers at the construction site can be consistent in the depths of the slots, within a given slot, and can be consistent in depth and width from slot to slot. Applicant submits that, given the level of precision available on construction sites, such assumptions are highly speculative.

However, this option defeats the labor-saving purpose of pre-cutting such slots at a manufacturing location, off site, while sacrificing precision of the manufacturing operation. Namely, this option sacrifices the precision which attends mass-produced manufacturing plant cuts. This option also sacrifices the time efficiency and

corresponding cost savings which attend such manufacturing plant cuts. Further, applicant submits that the probability of successfully matching precision of on-site slot cuts to manufactured cuts, is low.

As a second option, suppose, as suggested by the examiner, that the tape of Thomas is applied to the track member of Liang during manufacturing. As indicated above, on-site cutting of the track member is undesirable. Accordingly, the user is left with the option of attaching the "non-slot" studs to the "top" surface of the track member where indicated by the tape of Thomas. However, in such application, the lengths of the studs which are attached in the slots are greater than the lengths of the studs which are attached to the track member over the tape. So the user needs to cut studs to 2 different lengths, not to a common length. But cutting 2 lengths increases complexity and labor to the on-site framing process, whereas a primary objective of Liang is to provide labor savings (column 1 line 24).

If, as an alternative, the slots are on 24-inch centers and a 16-inch spacing is desired, half of the slots will be properly positioned, and will be used, while half will not be properly positioned and thus will not be used. Further, 2/3 of the studs will be connected to the track member where there is no slot. This leaves the user with the same no-win choice as above where 24-inch spacing is desired but the slots are on 24-inch centers.

Rather than combining the teaching of Thomas with Liang, applicant submits that one skilled in the art would recognize that the Liang teaching is best implemented by providing slot spacings in accord with the spacings desired at a particular construction project, and that the Liang technology is not suited to providing slots on a given track member at all possible spacings. Rather, the Liang technology, without more than Thomas, is limited to each track member having its slots spaced according to the spacings desired for a particular project. In such situation, each slot is filled with a stud, whereby the strength of the stud substitutes for, and thus compensates for, the loss of material in the slot. Thus, filling the slots with studs obviates, or substantially obviates, the strength lost as a result of removal of material at the slot, whereas, an empty slot bears a permanent loss of strength associated with removal of material from the slot.

The advantages of Liang can be achieved only where a limited number of standard spacings can be accommodated by a corresponding number of track member

inventory items or item bundles. E.g. a distributor stocks track members in the desired number of slot-spacing variants, and provides the necessary slot spacing variation for each job or project.

Accordingly, the examiner's proposed combination would not promote the labor savings objectives stated by Liang. Such option is not efficient. The option is additive and redundant, and does not add value, to the technology taught by Liang. Such option would therefore not be obvious to one of ordinary skill in the construction art.

Applicant thus submits that there is no incentive to combine the teaching of Thomas into the teaching of Liang.

Applicant further submits that, even if the teaching of Thomas is combined into the teaching of Liang, one still does not achieve the invention as claimed in Claim 1, either as originally claimed, or as now clarified in the claims as amended herein. As stated in the specification, the marking recited in the claims is typically material which is substantially received into the pores of the lumber product. Such marking material thus imposes no effective thickness change, no effective compressive change, no deleterious slip property change, on the lumber. Such marking material, therefore, does not require any accommodation by the user of such lumber.

Applicant submits that Claim 1 as originally filed and as now amended for clarity, is patentably distinct over the references. Withdrawal of the rejection is respectfully requested.

Claims 2-11 stand rejected under 35 U.S.C. §103 (a) as being unpatentable for obviousness, apparently with reference, directly or indirectly, to the rejection of Claim 1. Applicant submits that the clarifying amendments to Claim 1 obviate the rejection of Claims 2-11. Further, Claims 2-11 stand on their own merits, in addition to the patentability provided through Claim 1. For example, Claim 5 specifies a precision requirement of 0.13 inches. For example, Claim 6 recites side-by-side stud locator markings, including the additional marking 12A as illustrated in FIGURE 2. Applicant therefore, respectfully requests that the rejections of Claims 2-11 be withdrawn.

Independent Claim 12 originally recited that the stud locator markings are affixed directly to said elongate piece of lumber. For clarity and emphasis, Claim 12 has been amended to recite that the markings are deposited directly on...the piece of lumber at surfaces which assist in defining . . .[a] thickness dimension of the . . . piece

of lumber. No reference teaches or suggests placing the marking on the surface of the lumber itself. Liang deforms a metal tab out of a metal framing piece, called a "track member" by Liang, to provide a locator, or provides a pre-cut slot in a piece of wood lumber. Liang thus uses structural elements projecting either from or into the framing piece as stud location indicators. In either case, the lumber is deformed and weakened by the location indicators. Liang does not provide essentially dimensionless marking material for purposes of indicating stud locations.

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